

CLAIMS

1. A method of rendering a material hydrophilic, said method comprising the steps of:
 - (a) providing a material comprised of hydrophobic or borderline hydrophilic components;
 - (b) applying a high energy surface treatment to said material to form a treated material; and
 - (c) applying a plurality of nanoparticles to said treated material.
2. The method of Claim 1 wherein said material comprises a textile such as a nonwoven material comprised of hydrophobic or borderline hydrophilic structural components.
3. The method of Claim 2 wherein at least some of the structural components of said nonwoven material are at least partially comprised of a polyolefin.
4. The method of Claim 3 wherein at least some of the structural components of said nonwoven material are at least partially comprised of polyethylene.
5. The method of Claim 3 wherein at least some of the structural components of said nonwoven material are at least partially comprised of polypropylene.
6. The method of Claim 1 wherein the high energy surface treatment applied in step (b) comprises a treatment selected from the group consisting of: corona discharge treatment; plasma treatment; UV radiation; ion beam treatment; and electron beam treatment.
7. The method of Claim 1 wherein said at least some of said nanoparticles comprise on or more of the following: non-photoactive, photoactive, and passified photoactive.
8. The method of Claim 1 wherein after step (c), the surface of the treated nonwoven material becomes hydrophilic having an advancing contact angle with water of less than 90° after 30 seconds of spreading.
9. A method according to Claim 1 wherein the liquid strike-through time of said treated nonwoven material with said nanoparticles applied thereto is less than or equal to about 10 seconds after 3 gushes of test liquid according to the Strike Through Test.

10. A method according to Claim 1 wherein the liquid strike-through time of said treated nonwoven material with said nanoparticles applied thereto is less than or equal to about 6 seconds after 3 gushes of test liquid according to the Strike Through Test.
11. A method according to Claim 1 wherein the liquid strike-through time of said treated nonwoven material with said nanoparticles applied thereto is less than or equal to about 3 seconds after 3 gushes of test liquid according to the Strike Through Test.

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